

1        WHAT IS CLAIMED IS:

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3            1.        A method for automatically packaging a non-flowing product into pouches  
4 comprising the steps:

5                    suspending a pouch having an unsealed edge so that the unsealed edge  
6 is held open,

7                    compressively forming a product cake in a forming chamber wherein one  
8 surface of said forming chamber is the end wall of a movable metering shoe, and

9                    ejecting said product cake from said forming chamber into said suspended  
10 pouch by moving said movable metering shoe toward said suspended pouch.

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12            2.        The method of claim 1 wherein said forming chamber is located within a  
13 multi-position turret, and said metering shoe is mounted radially in said turret, comprising  
14 the further steps:

15                    moving said turret into a first position in which product is compressively fed  
16 into and packed in said forming chamber, and

17                    rotating said turret to a second position wherein said forming chamber is  
18 aligned with said suspended pouch.

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20            3.        The method of claim 2 wherein said metering shoe is adjustably mounted  
21 on said turret and comprising the further step:

22                    adjusting the position of said metering shoe on said turret to achieve a  
23 desired weight of product packed in said forming chamber.

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25            4.        The method of claim 2 wherein said movable metering shoe moves  
26 downwardly in a vertical direction to eject said product cake into said pouch.

1           5.     The method of claim 1 wherein said forming chamber lies in a fixed position  
2 above said suspended pouch, and wherein said movable metering shoe moves in a  
3 direction between a retracted position in which product may be packed in said forming  
4 chamber and an ejection position in which the formed product cake is driven into said  
5 pouch.

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7           6.     The method of claim 6 wherein said movable metering shoe moves  
8 downwardly in a vertical direction to eject said product cake into said pouch.

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10          7.     The method of claim 1 wherein said product is tuna fish.

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12          8.     Apparatus for automatically packaging a non-flowing product into pouches,  
13 comprising:

14               suspension means for holding a pouch with an unsealed edge in a position  
15 with said unsealed edge open,

16               forming chamber means in which said product is compressively formed into  
17 a cake having a predetermined weight and shape,

18               a movable metering shoe movable between first and second positions and  
19 having an end wall which in said first position of said movable metering shoe is one  
20 surface of said forming chamber means,

21               feed means for compressively feeding said product into said forming  
22 chamber means, and

23               ejection means for moving said movable metering shoe into said second  
24 position in which said formed cake is driven into said suspended pouch.

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1           9.     The apparatus of claim 8 wherein said forming chamber means comprises  
2 a radially extending cavity formed in a multi-position turret and wherein said movable  
3 metering shoe is carried in said radially extending cavity.

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5           10.    The apparatus of claim 9 further comprising adjustment means for said  
6 movable metering shoe.

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8           11.    The apparatus of claim 8 wherein said product is tuna fish.

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10          12.    The apparatus of claim 9 wherein said multi-position turret is movable  
11 between first and second positions, and further comprising:

12                feed means for compressively feeding a known quantity of said product into  
13 said forming chamber means to form a cake of known size and weight when said turret  
14 is in said first position,

15                means for holding said metering shoe in its said first position as said cake  
16 is being formed,

17                means for moving said turret to said second position in which said radially  
18 extending cavity is aligned with said suspended pouch, and

19                ejection means for causing said movable metering shoe to move in said  
20 radially extending cavity to its second position in which said cake is driven into said  
21 suspended pouch.

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23          13.    The apparatus of claim 8 wherein said movable metering shoe is carried in  
24 a fixed frame and wherein said movable metering shoe moves upwardly and downwardly  
25 in a vertical direction.

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14. The apparatus of claim 13 wherein said suspension means for holding said pouch is vertically aligned with and beneath said movable metering shoe.

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